How American Airlines Powers Global TechOps with a Real-Time Data Hub

Country

United States

Industry

Airlines, Transportation & Logistics

Challenge

To minimize the risk of costly flight delays, the global airline sought to improve its maintenance operations by enabling near real-time data synchronization across its maintenance systems.

Solution

The airline leveraged Striim Cloud, a fully-managed service to stream and integrate data in real-time from maintenance and operational systems running on MongoDB to a data lake built on the Microsoft Azure analytics platform.

Benefits

The global airline can now update its maintenance systems in near real-time, dramatically reducing the risk of operational delays in airports, cutting costs, and increasing customer satisfaction. At the same time, the Striim and Microsoft solution is helping the company launch new machine-learning innovation projects that will empower it to achieve even greater maintenance efficiencies and cost savings.

Results:

- **Efficiency** – Cuts database updates from five minutes to a few seconds.
- **Effectiveness** – Reduces flight delays caused by maintenance, cuts costs, and improves customer satisfaction.
- **Innovation** – Drives cutting-edge machine-learning projects that will deliver new savings.

American Airlines is on a mission to care for people on their life journey. Serving over 5,800 flights a day to over 350 plus destinations across 60-plus countries requires massive amounts of data streaming in real-time to support flight operations.

TechOps team members use their skills and expertise to ensure planes, team members, and customers depart and arrive safely and reliably every time on every flight. You may see them at your local airports wearing vests and using iPads working with ground crew. They track aircraft telemetry across the globe, deploy crews for spot maintenance, and route aircraft to the world's largest maintenance facility in Tulsa, Oklahoma.

In 2022, American Airlines announced a strategic partnership with Microsoft Azure to transform operations and analytics in the cloud. The American Airlines TechOps team wanted to step up to the internal challenge of adopting the mandate to modernize and accelerate their operations.

> *"Striim is a fully managed service that reduces our total cost of ownership while providing a simple drag and drop UI. There's no maintenance overhead for American Airlines to maintain the infrastructure."*
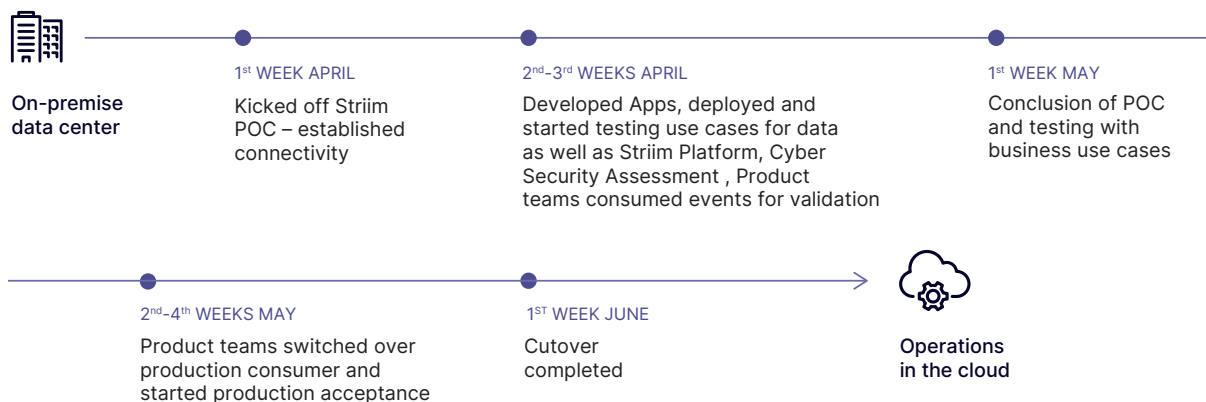
Ganesh Deivarayan
Sr. Manager at American Airlines

TechOps deployed a real-time data hub consisting of MongoDB, Striim, Azure, and Databricks to ensure a seamless, real-time operation at massive scale. This architecture leverages change data capture from MongoDB to get operational data in real time, process and model the data for downstream usage, and stream it to consumers in real-time. The output is data products for TechOps and business teams to monitor and action operational data to provide a delightful travel experience to customers.
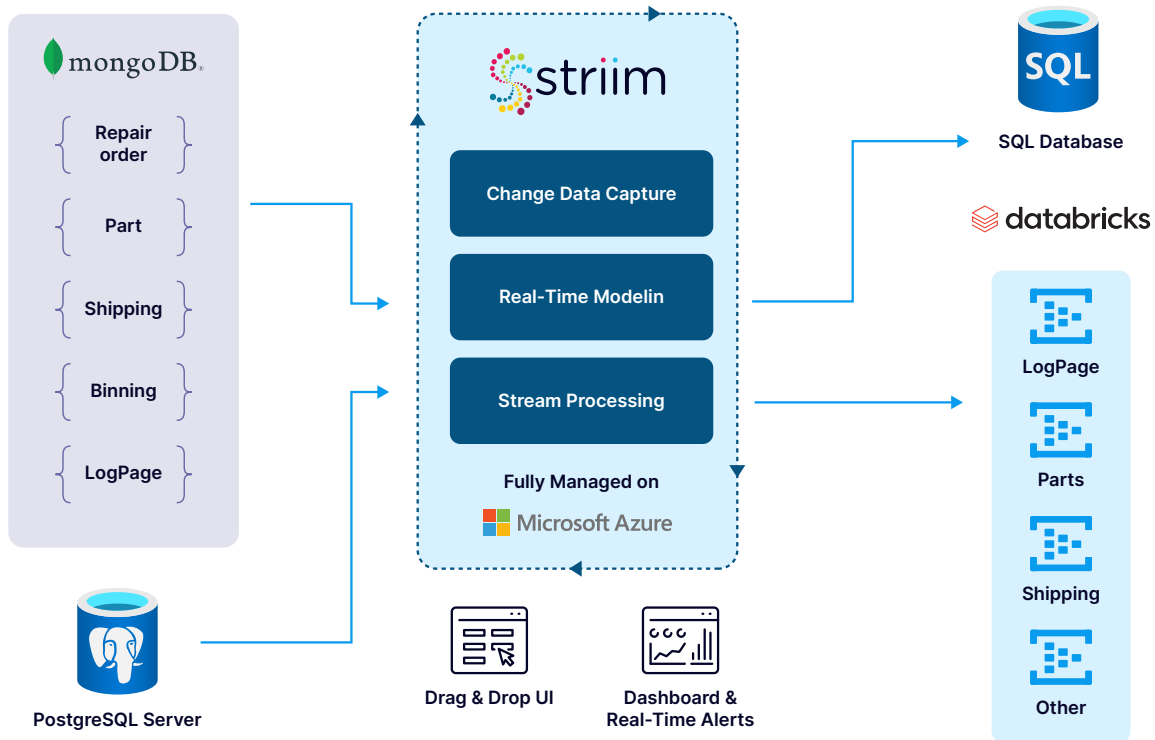
Today with the combined power of Microsoft Azure, Databricks, and Striim, American Airlines TechOps has completed the vision of digital transformation and were able to cut over to production at a global scale within 12 weeks.

On-premise data center

1st WEEK APRIL
Kicked off Striim POC – established connectivity

2nd–3rd WEEKS APRIL
Developed Apps, deployed and started testing use cases for data as well as Striim Platform, Cyber Security Assessment , Product teams consumed events for validation

1st WEEK MAY
Conclusion of POC and testing with business use cases

2nd–4th WEEKS MAY
Product teams switched over production consumer and started production acceptance

1ST WEEK JUNE
Cutover completed

Operations in the cloud

To find out more about how we could help your organization, visit **striim.com**
View the case study video **here**.